

PDB14

SOCIAL NETWORKS-BASED DIABETES EDUCATION IMPROVES SOCIAL EFFICACY AND COHESION, AND FAVORS SUSTAINABILITY

Shaya FT¹, Howard D¹, Foster C¹, Chirikov VV¹, Snitker S², Costas J³, Kucharski K³, Tangirala K³, Frimpter J³¹University of Maryland School of Pharmacy, Baltimore, MD, USA, ²University of Maryland School of Medicine, Baltimore, MD, USA, ³Sanofi US, Bridgewater, NJ, USA

OBJECTIVES: Diabetes group education programs have shown better clinical outcomes than one-on-one programs. That effect often subsides when the program is discontinued. We explore the impact of a novel intervention, in a largely African-American population with diabetes. We assess the impact of leveraging patients' natural social networks on measures of social efficacy and cohesion, with the assumption that those variables will support behavior change and mitigate modifiable risk factors. **METHODS:** Intervention patients (P2P*) were asked to recruit peers, form small clusters, and attended monthly diabetes education sessions. Control patients were recruited, educated and followed up individually. P2P* patients engaged in interactive educational sessions within their cluster. HbA1c, blood glucose, functional status (SF-12), self-efficacy (General Self-Efficacy Scale), cohesion (Perceived Cohesion Scale), social network characteristics (Social Network Index), and disease knowledge (Diabetes Knowledge Test) were recorded at baseline and followed up at 3-months. **RESULTS:** Among the 136 patients recruited in the study, intervention patients' (68) scores were lower on the number of active social network domains (1.1 vs.1.4, P=0.09), network diversity (5.6 vs. 5.9, P=0.30), and number of people in network (11.0 vs. 12.3, P=0.21) than controls (68), at baseline. Other baseline characteristics were evenly distributed between arms. After 3 months of follow-up, the intervention group had a statistically significantly greater increase in values for active social network domains (1.1, P<0.01), diversity (4.52, P<0.01), and contacts (0.84, P<0.01) than the control group. At the second follow-up, (only 22 patients have reached that point so far) social network index values improved even further from baseline (3.1, 10.8, and 1.0, respectively), compared to the controls. **CONCLUSIONS:** The P2P* social networks intervention is showing improved social efficacy and integration of patients within their existing networks. These results inform the translation of diabetes education to a sustainable diabetes self-management behavior at the community level.

PDB15

RETROSPECTIVE COHORT STUDY EVALUATING LIRAGLUTIDE AND EXENATIDE IN A VETERAN POPULATION

Bounthavong M¹, Tran JN², Watanabe JH³, Chen TC¹¹Veterans Affairs San Diego Healthcare System, San Diego, CA, USA, ²OptumRX, Irvine, CA, USA, ³Western University of Health Sciences, Pomona, CA, USA

OBJECTIVES: To evaluate hemoglobin A1c (HbA1c) reduction in exenatide and liraglutide in a veteran population. **METHODS:** Retrospective cohort study investigating exenatide and liraglutide use in a veteran population over a 24-month follow-up period. Patients were included if they were ≥ 18 years, eligible for veterans benefits, and initiated exenatide or liraglutide at the Veterans Health Administration (VHA). Patients were excluded if they were prescribed both medications during the follow-up period or crossed over into the other group. Clinical data were extracted from the VHA Corporate Data Warehouse. HbA1c reduction was evaluated at 12 months and 24 months. Main dependent variable was HbA1c reduction from baseline at 24 months. Multiple linear regression evaluated reduction in HbA1c controlling for potential confounders. Statistical significance was set at P=0.05. **RESULTS:** A total of 1318 patients were identified receiving exenatide (N=1181) and liraglutide (N=137) based on inclusion and exclusion criteria. A majority of the exenatide patients were male (N=1102, 93%); average age was 59.8 years, average Charlson comorbidity index (CCI) was 1.53, and average BMI was 37.53 kg/m². Similarly, a majority of the liraglutide patients were male (N=126, 92%); average age was 62.93 years; average CCI was 1.51; and average BMI was 34.68 kg/m². At 12 months HbA1c reduction was significant within the exenatide (P<0.0001) and liraglutide (P<0.0001) groups. We observed similar findings at the 24-month follow up. In the multiple linear regression, exenatide was associated with an HbA1c reduction of 0.093% (95% Confidence Interval (CI): -0.55, 0.74) compared to liraglutide while controlling for confounders (R-square=0.37). **CONCLUSIONS:** These results have important implications regarding formulary decisions. Other factors such as dosing regimen, adherence, and side effect profile may be important attributes for formulary preference. Moreover, evaluating clinical outcomes (e.g., stroke and mortality) may reveal important differences. Generalizability may be limited to a non-veteran population.

PDB16

RISK OF CARDIOVASCULAR DISEASES ASSOCIATED WITH ANTIDIABETIC MONOTHERAPY INTERVALS IN TYPE-2 DIABETIC PATIENTS – A PRELIMINARY STUDY ON TAIWAN PAY-FOR-PERFORMANCE DIABETES REGISTRY

Zhang XQ¹, Zhu S¹, Chen LC², Cheng LJ¹¹University of Macau, Macau, Macau, ²University of Nottingham, Nottingham, UK

OBJECTIVES: To establish a framework assessing effects of multiple drug switching patterns, this preliminary study aimed to assess the risk of cardiovascular diseases (CVDs) associated with antidiabetic monotherapy intervals in type-2 diabetic (T2D) patients. **METHODS:** This retrospective cohort study was conducted from April 2004 to February 2009 using the Taiwan Pay-for-Performance Diabetes Registry (November 2003 to February 2009), which contains clinical indicators and claim records of registered diabetic patients. Adult newly-registered T2D patients who initiated antidiabetics from April 2004 to February 2009 were included. Individuals' antidiabetic monotherapy intervals including metformin, sulphonylureas (SUs), meglitinides (MGs), acarbose,

pioglitazone, rosiglitazone, and insulin were identified and followed to any change of interval, cardiovascular event (i.e. myocardial infarction, ischemic heart disease and congestive heart failure) or the end of study. Cox regression was used to evaluate CVD risk associated with different interval groups comparing against metformin and adjusted for diabetic history (year), gender, age, body mass index, blood pressure, triglyceride, and use of anti-hypertensive and lipid-controlling drugs. **RESULTS:** Of the 75,303 newly-registered T2D patients without CVDs included in the study, 150,144 intervals and 949 events were identified. The mean follow-up duration was 3.9 \pm 2.1 years per patient and the mean interval period was 238 \pm 317 days. Of the seven interval groups, SU monotherapy was the most frequently identified and the highest CVD incidence group. All interval groups had significantly higher risk of CVDs than metformin, the Hazard Ratio (95% confidence interval) for SUs, MGs, acarbose, pioglitazone, rosiglitazone, and insulin were 1.563 (1.31, 1.86); 1.38 (1.10, 1.74); 1.56 (1.22, 1.98); 1.53 (1.19, 1.95); 1.50 (1.18, 1.92); 1.48 (1.20, 1.83), respectively. **CONCLUSIONS:** The results are inconsistent with previous literature comparing CVD risk of acarbose, MGs and pioglitazone against metformin. Interval-based CVD risk may be biased by the interval definition (monotherapy, multiple-therapy, multiple switching) and individual patients' underline condition.

PDB17

CHARACTERISTICS OF PATIENTS INITIATING TREATMENT WITH EXENATIDE ONCE WEEKLY

Best JH¹, Saunders W², Maggs D³¹University of Washington, Seattle, WA, USA, ²Saunders Research, LLC, Charlotte, NC, USA,³Amylin Pharmaceuticals, Inc., San Diego, CA, USA

OBJECTIVES: As exenatide QW (EQW) is the first approved GLP-1 receptor agonist administered weekly, it is important to understand how this treatment is being utilized in patients with type 2 diabetes initiating treatment. The purpose of this study is to describe the demographic and clinical characteristics and medication patterns of patients initiating EQW in a real-world setting. **METHODS:** This retrospective cohort study used data from the Medical Quality Improvement Consortium of ambulatory medical practices that use Centricity Office from GE Healthcare IT as their electronic medical record. Patients (n=2,715) receiving a prescription for EQW between February 1, 2012 and August 31, 2012 were identified. **RESULTS:** Of patients who initiated EQW, 56% were female, 60% white and 32% unknown/other, 69% 40 to 64 y. For patients with data recorded, mean BMI was 37 kg/m², with 16% with BMI subset 20 to <30, 55% with 30 to <40, and 29% with ≥ 40 ; 25% had baseline A1C $\geq 9\%$, 34% had 7.5 to <9%, 27% had 6.5 to <7.5%, and 15% had <6.5%. Glucose-lowering medications used within 90 days before initiating EQW included combination therapy (25%), MET only (11%), insulin only (9%), SU only (4%), DPP-IV inhibitor only (3%), and no glucose-lowering medication (47%).

Within 9 months prior to initiating EQW, the most common non-diabetes comorbid conditions were hyperlipidemia (9%) and hypertension (7%). The most common concomitant medications were MET (54%), insulin (needle, 32%), lisinopril (20%), insulin glargine (18%), simvastatin (17%), glimepiride (17%), liraglutide (16%), levothyroxine sodium (15%), atorvastatin calcium (14%), pioglitazone HCL (13%), glipizide (12%), insulin aspart (12%), and rosuvastatin calcium (12%). **CONCLUSIONS:** This study, the first to characterize patients treated in routine clinical practice within 6 months after EQW became available in the US, indicates that EQW was prescribed to patients across a broad range of A1C levels and use of glucose-lowering agents.

PDB18

PREVALENCE AND INCIDENCE OF ACUTE UROGENITAL CONDITIONS IN A US COMMERCIAL-INSURED POPULATION

Li Q¹, Wu N¹, Lee E², Sullivan PW³¹United BioSource Corporation, Lexington, MA, USA, ²Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT, USA, ³Regis University School of Pharmacy, Denver, CO, USA

OBJECTIVES: A retrospective analysis was conducted to compare the prevalence and incidence of acute urinary tract infections (UTIs) and genital infections (GIs) between adults with type 2 diabetes mellitus (T2DM) versus those without DM (no-DM). **METHODS:** Commercially-insured adults were selected from a large, US claims database from 2006-2010. Patients with T2DM were identified via diagnosis codes and use of non-insulin, anti-diabetic medications. Prevalence and incidence of UTIs (cystitis, urethritis, or acute pyelonephritis) or GIs (females: vulvovaginal candidiasis and bacterial vaginosis; males: balanitis) were estimated by gender for each calendar year (CY), and averages over CYs were reported. Prevalence was defined as the proportion of individuals with 1+ medical claim for UTI or GI, and incidence as the number of events over 1000 person-years, assuming each event lasted ≤ 30 days. Age-adjusted prevalence ratio (PR) and incidence rate ratio (IRR) between T2DM vs. no-DM were reported with 95% confidence intervals (CIs). **RESULTS:** 18-30 million individuals with T2DM were identified per CY; 6.8% (2006) to 8.8% (2010). Prevalence and incidence of UTI among T2DM males were 4.6% and 55.3/1000 person-years and were higher among T2DM males than no-DM (PR [95% CI]: 2.23[2.22-2.24]; IRR [95% CI]: 2.36[2.35-2.37]). The prevalence and incidence of GIs among T2DM males were 0.4% and 4.3/1000 person-years and were higher among T2DM males than no-DM (PR: 3.99[3.92-4.05]; IRR: 4.00[3.92-4.07]). Prevalence and incidence of UTI among T2DM females were 14.1% and 180.5/1000 person-years, and rates of GI were 4.2% and 46.4/1000 person-years. The prevalence and incidence of UTIs were higher among T2DM females than no-DM (PR: 1.77[1.77-1.78]; IRR: 1.88[1.87-1.88]). The prevalence and incidence of GIs were higher among T2DM females than no-DM (PR: 1.40[1.40-1.41]; IRR: 1.39[1.38-1.39]). **CONCLUSIONS:** T2DM was positively associated with acute urogenital conditions for both males and females.